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## NOTES AND LITERATURE

### DEAN AND EASTMAN'S BIBLIOGRAPHY OF FISHES

IN order that the production and diffusion of knowledge may but be promoted, knowledge gained must be published in some permanent form. But when the publications become numerous and scattered throughout many journals, and in various languages, it becomes at length difficult, or even impossible, for any human being to retain in mind all that others have discovered and written. The literature must be organized in such a way that the seeker after knowledge and the producer of knowledge may be enabled to determine easily what has been published on any particular subject. Hence the need for bibliographies and bibliographies of bibliographies, for the *Zoological Record*, and the International Catalogue of Science. Hence the justification, the necessity, for Dean and Eastman's Bibliography of Fishes. Dean tells us in the preface that in this work there are listed more than 40,000 titles. How small a number of these could any man command were it not for some such collection!

One volume only of the work has yet appeared. This is a book of 718 octavo pages of small print; and this is occupied simply by the authors' titles of papers alphabetically arranged. And only those authors have been reached whose names begin with the letters A-K. A second volume is to follow which is to include the others. The time, the patience and the labor which the accumulation of such a list demands may be surmised by the reader of the preface; it can only be realized by one who has tried his hand at something of the kind himself.

As the work will then stand, the student of fishes can determine readily all the papers that any author, as Agassiz or Baird for example, has written; or he can glance over all the 40,000 titles and pick out those which seem to have a bearing on his subject. To obviate the latter necessity, a third volume is to follow which is to be an index to the preceding volumes. In the two volumes of authors' titles each paper is followed by the year of publication and a serial number, as "Jordan, 1891, 4"; and in the index each paper is to be referred to briefly by the author's name, the year and the serial number. Economy of labor and

expense is thus effected. The index will certainly be classified in such a way as to make it reasonably easy to arrive at the papers desired. In estimating, therefore, the work that Dr. Dean and his editor and assistants have done we must consider not only the collection and preparation of the titles, but likewise the analysis of these papers and the recording of the contents under their proper heads.

There is a need for more yet to be done. The author tells us that the index does not include detailed references to species, genera, or even, in many cases, families of fishes. "This would entail many years' additional listing, but should unquestionably next be done." The busy student may want to know what has been written on the Centrarchidæ, or the genus *Lepisosteus*, or the rainbow trout; and he ought to find all of the papers recorded under each head. May the good men who have worked on this Bibliography of Fishes retain their powers and live long enough to accomplish the work.

However, it will be open to any one to go through those 40,000 books and papers and cull out the things bearing on the subject he has chosen and to publish a little bibliography of his own.

The present writer has not undertaken to discover omissions of papers or errors in quoting them. Certainly omissions and errors occur, as in any human production; but doubtless all possible care has been taken to avoid them. Two omissions have incidentally been brought to notice. The first of these is a paper by Eigenmann on a fossil species of *Sebastodes*, in *Zoe*, Volume I, 1890, page 17; although another paper cited ends with page 15. The other paper omitted is B. K. Emerson's "Geology of Old Hampshire County, Massachusetts," in which there is a list of the Triassic fishes found in the state mentioned. Dr. Dean must have had a record of this paper.<sup>1</sup> A paper by E. W. Claypole<sup>2</sup> is quoted from the *American Geologist*, Volume XXIX, p. 44; but the paper is not found as cited; nor elsewhere, so far as the present writer knows.

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<sup>1</sup> *Science*, Vol. XVI, 1902, p. 701.

<sup>2</sup> Claypole, 1890, 1.